AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior claims presented in the application.

1. (Currently amended) An allergen hybrid protein having reduced allergenicity but retaining immunogenicity, comprising a peptide epitope sequence of an allergen protein and a scaffold protein that is structurally homologous to the allergen protein, wherein the peptide epitope sequence is ~~about 6 to 45 amino acids~~ 6 to 45 amino acids in length and the hybrid protein has a native conformation and the peptide epitope sequence is present in a surface accessible region of the hybrid protein corresponding to its position in the allergen protein.

2. (Original) The hybrid protein of claim 1 wherein the peptide epitope sequence is in a loop or corner region of the hybrid protein.

3. (Original) The hybrid protein of claim 1 wherein the scaffold protein has at least 50 percent sequence identity to the allergen from which the peptide epitope sequence is derived.

4. (Original) The hybrid protein of claim 1 wherein the scaffold protein does not have more than 70 percent sequence identity to the allergen protein from which the peptide epitope sequence is derived.

5 - 6. (Canceled)

7. (Currently amended) The hybrid protein of claim 1 wherein the peptide epitope sequence is ~~about 6 to about 35~~ 6 to about 35 amino acids in length.

8. (Currently amended) The hybrid protein of claim 7 wherein the peptide epitope sequence is ~~about 6 to about 25~~ 6 to about 25 amino acids in length.

9. (Currently amended) The hybrid protein of claim 8 wherein the peptide epitope sequence is ~~about 6 to about 15~~ 6 to about 15 amino acids in length.

10. (Original) The hybrid protein of claim 1 further comprising a signal peptide.

11. (Original) The hybrid protein of claim 1 further comprising a protease processing site.

12. (Original) The hybrid protein of claim 1 which is a hybrid vespid venom allergen protein.

13. (Original) The hybrid protein of claim 12, which is a hybrid vespid venom antigen 5 protein.

14. (Original) The hybrid protein of claim 13 wherein the peptide epitope sequence is from the genus Vespula and the scaffold protein is from the genus Polistes.

15. (Original) The hybrid protein of claim 14 wherein the peptide epitope sequence is from the species vulgaris.

16. (Original) The hybrid protein of claim 14 wherein the scaffold protein is from the species annularis.

17. (Previously presented) An allergen hybrid protein having reduced allergenicity but retaining immunogenicity, comprising a peptide epitope sequence of an allergen protein and a scaffold protein that is structurally homologous to the allergen protein, wherein said hybrid protein has a native conformation and said peptide epitope sequence is present in a surface accessible region of the hybrid protein corresponding to its position in the allergen protein, said hybrid protein is a hybrid vespid venom antigen 5 protein, said the peptide epitope comprises a sequence selected from the group consisting of

NNYCKIKC (SEQ ID: 1);

NNYCKIKCLKGGVHTACK (SEQ ID: 2);

NNYCKIKCLKGGVHTACKYGSLKP (SEQ ID: 3);

NNYCKIKCLKGGVHTACKYGSLKPNCGNKVVV (SEQ ID: 4);

NNYCKIKCLKGGVHTACKYGSLKPNCGNKVVVSYGLTKQ (SEQ ID: 5);

NNYCKIKCLKGGVHTACKYGSLKPNCGNKVVVSYGLTKQEKQDILK (SEQ ID: 6);

QVGQNVALTGSTAAKYDDPVKLVKMWEDEVKDYNPKKKFSGNDFLKTG (SEQ ID NO: 7);

HYTQMVWANTKEVGCGSIKYIQEKWHKHYLVCNYGPSGNFKNEELYQTK (SEQ ID NO: 8)

LKPNCGNKVVV (SEQ ID NO: 9);

LTGSTAAKYDD (SEQ ID NO: 10);

PKKKFSGND (SEQ ID NO: 11)

IQIKWHK (SEQ ID NO: 12);

FKNEELYQTK (SEQ ID NO: 13);

NNYCKIKCLKGGVHTACKYGSLKPNCGNKVVVSYGLTKQEKQDILKEHND (SEQ ID NO: 93);

NNYCKIKCLKGGVHTACKYGSLKPNCGNKVVVSYGLTKQEKQDILKEHND FRQKIAR (SEQ ID NO: 94); and

NNYCKIKCLKGGVHTACKYGSLKPNCGNKVVVSYGLTKQEKQDILKEHND FRQKIARGLETRGNPGPQPPAKNMKN (SEQ ID NO: 95).

18. (Original) The hybrid protein of claim 1 wherein the peptide epitope sequence comprises a conservative amino acid change.

19. (Previously presented) The hybrid protein of claim 18 wherein the peptide epitope sequence comprising a conservative amino acid change is characterized as reducing

antibody binding to the peptide epitope sequence by at least 50-percent relative to antibody binding to the peptide epitope sequence without the conservative amino acid change, in an *in vitro* assay, wherein the peptide epitope sequence comprising a conservative amino acid change is present in the assay at a concentration less than 10-fold greater than the peptide epitope sequence without the conservative amino acid change, and the assay measures binding of the peptide epitope sequences to an antibody directed against a polypeptide comprising the peptide epitope sequence.

20-35. (Canceled)